

Message from the Workshop Chairs

DiSE 2017

1st Intl. Workshop on Design an Innovation in Software Engineering

Design has been defined in different ways in different communities concerned by software. Most often, designers have their own descriptions of the design process but mostly they have many similarities. Software design can be defined as “Design is a creative process which has a user perspective and drives development based on your specific customers’ needs. Most importantly, our statement in this workshop is that design is a problem-solving activity and grounded in Herbert A. Simon’s work, *The Sciences of the Artificial* (Cambridge, MA: MIT Press, 1996; See also Nigel Cross, “Editorial: Forty Years of Design Research,” *Design Studies* 28(1) (2007): 1–4; Nigan Bayazit, “Investigating Design: A Review of Forty Years of Design Research,” *Design Issues* 20 (1) (2004): 16–29.

Design allows not only to find out how the software is going to look and be used, but also allows both software owners and developers to realize how it is going to function and what will be its business-added values and cost-benefits. Design is a place to identify and resolve trade-offs between different conflicting concerns such as human experiences, organizational success, sustainability and other quality attributes such the conflicts between usability and security.

There is are a disparate set of design models, methods, supporting tools and processes practiced by different communities of practices who have different backgrounds and experience in the field of software engineering (UML in software engineering, design science, user experience design, etc). The following are the questions that will be addressed while building a common, intra-disciplinary notion of design, its constituent parts and practices:

1. How software design is (or can be) defined, and how is it perceived by software engineers, end-users, and stakeholders as well as by other related design communities?
2. What are the major drawbacks of the design methods in the software engineering community, and how can design and design methods developed by other communities supplement and be integrated into the software engineering design toolbox?
3. What kind of cross-pollination bridges can be developed over the current gaps between different software design approaches and communities?
4. Is there a common ground and a body of knowledge beyond the diversity of design methods and practices that exist today in the different communities?
5. Why do only few innovative software systems design make it to market and most fail, meaning how do we create software products that people and companies are aiming to buy and use?

Innovation by design, design thinking, user experiences design, and design science research are proven methods for innovation. They have the power to supplement existing software engineering design practices. How they are used in software engineering is also a question this first edition of the DiSE workshop will aim to address. What are the avenues from cross-pollinating design disciplines and software engineering?

Compared other research areas such as requirements engineering and software measurement, design and innovations are key concerns that merit the same level of interest. This workshop strongly fosters the building of a new community dedicated to this area. The challenge is to be attractive enough for people from outside the software engineering community as well as from industry; especially those that have a tradition of design.

The workshop is organized around four major activities/sessions:

- Preparation for the workshop. All participants including authors of contributed by papers and organizers are required to submit 1 slide of statement on what software design is today and what innovation in design means to them.
- You said “Software Design and Innovation”? Why this Workshop? After a short presentation of the journey, authors and participants are given the opportunity to introduce themselves and positions/answers to some of the questions listed above. Authors are invited to stick their ideas and collection of topics on the wall for further discussion in the afternoon.
- Experiencing design thinking: An interactive workshop. The design thinking framework is introduced by one of workshop organizers and in small groups participants will apply it to solving a software engineering problem.
- Innovation by design and open innovation. This session will be dedicated to the review of the best design methods and practices for software engineering innovation. Participants should attend this session with a particular method in mind they would like to analyze (Personas, storytelling, use case maps, mind maps, touch points, storyboarding). A list will be available on the workshop site. Breakout groups are invited on how these methods can be incorporated in the software engineering lifecycle. Breakouts groups will report back conclusions to the full group.
- Closing/discussion for a common edited book/special issue. A guest speaker from industry will presenting his position on what really works in industry and how innovation is happening in the software industry.
- As the workshop aims to be an interdisciplinary forum, we have used different ways to attract of a balanced pool of participants. A call for papers has resulted in three selected papers. We also invited other people from the ICSE/co-located events participants including MobileSoft and Global Software Engineering Conference as well as people from the local industry. Our hope is to engage some of the promising start-ups in Buenos Aires for fruitful discussions on innovation.
- Planned post workshop activities include a special issue in one of the software engineering magazines or journals or an edited-volume “DISE: design and Innovation in Software Engineering”.

Find out more at <http://step.lut.fi/dise>

We look forward to seeing you at the workshop!

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DiSE 2017 Co-chairs